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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,894	03/01/2004	Mary Morabito O'Neill	03W179	2583

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EXAMINER	
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2878	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

TH

Office Action Summary	Application No.	Applicant(s)
	10/790,894	O'NEILL ET AL.
	Examiner	Art Unit
	Kevin Wyatt	2878

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

2. Claim 1 is provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 17 of copending Application No. 10790889. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 7 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hou (U.S. Patent No. 6,596,979 B2).

Regarding claim 1, Hou shows in Figs. 2A-2B, 3 and 10, a method for locating a position of a feature in a scene, comprising the steps of forming an image of the feature using a segmented array having a plurality of array subelements, wherein each of the array subelements has an output signal (col. 5, lines 27-35); and cooperatively analyzing the output signals from at least two spatially adjacent array subelements to establish a data set reflective of an extent to which output signals responsive to the image of the feature are produced from exactly one or from more than one of the adjacent array subelements (col. 5, lines 48-57), and to reach a conclusion from the data set as to a location of the image of the feature on the segmented array (col. 5, lines 57-60).

Regarding claim 2, Hou shows in Figs. 2A-2B, 3 and 10, the step of forming includes the step of providing a sensor including an optics system (208, i.e., rod lens array or 274, i.e., optical lens) that forms the image of the feature of the scene at an image surface (250, i.e., photodetector array or 276, i.e., image sensor), and the segmented array at the image surface upon which the image is formed.

Regarding claim 7, Hou shows in Fig. 10, the step of providing a sensor includes the step of providing a one-dimensional segmented array (performs the function of a one-dimensional array) having non-spatially overlapping array subelements.

Regarding claim 19, Hou shows in Fig. 10, the step of providing a sensor includes the step of providing a one-dimensional segmented light-detector array having non-spatially overlapping light-detector subelements.

5. Claims 1-2, 8-14, 20-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Vock (U.S. Patent No. 6,320,173 B1).

Regarding claim 1, Vock shows in Fig. 6A-B a method for locating a position of a feature in a scene, comprising the steps of forming an image (120, 142e, 152 or 154) of the feature using a segmented array (132, 140 or 150) having a plurality of array subelements, wherein each of the array subelements has an output signal (col. 7, lines 33-40); and cooperatively analyzing the output signals from at least two spatially adjacent array subelements to establish a data set reflective of an extent to which output signals responsive to the image of the feature are produced from exactly one or from more than one of the adjacent array subelements, and to reach a conclusion from the data set as to a location of the image of the feature on the segmented array (col. 3, 13-25 and col. 7, lines 33-40).

Regarding claim 2, Vock shows in Figs. 2, 4-6, a method wherein the step of forming includes the step of providing a sensor (40, i.e., solid state camera, 132, i.e., focal plane elements or 108, i.e., array of elements) including an optics system (42, 71,102 and 130) that forms the image of the feature of the scene at an image surface (focal plane), and the segmented array at the image surface upon which the image is formed.

Regarding claim 8, Vock shows in Figs. 4-6, a method wherein the step of

providing a sensor includes the step of providing a two-dimensional segmented array (108, 140 or 150).

Regarding claim 9, Vock shows in Figs. 4-6, a method wherein the step of providing a sensor includes the step of providing a two-dimensional segmented array formed of a pattern of intersecting array subelements (108, 140 or 150).

Regarding claim 10, Vock discloses a method wherein the step of cooperatively analyzing includes the steps of determining whether output signals responsive to the image of the feature are produced in single ones or combinations of the intersecting array subelements, and identifying the location of the image of the feature responsive to a distribution of the output signals from the step of determining whether output signals responsive to the image of the feature are produced in the intersecting array subelements (col. 3, 13-25 and col. 7, lines 33-40).

Regarding claim 11, Vock discloses a method wherein the step of cooperatively analyzing includes the steps of determining the relative strengths of the output signals responsive to the image of the feature that are produced in combinations of the intersecting array subelements, and identifying the location of the image of the feature responsive to the relative strengths of the output signals from the step of determining the relative strengths of the output signals responsive to the image of the feature that are produced in combinations of the intersecting array subelements (col. 12, lines 49-60 and col. 13, lines 1-6).

Regarding claim 12, Vock shows in Figs. 6A-B a method wherein the step of providing a sensor (140 or 150) includes the step of providing a two-dimensional

segmented array formed of a pattern of square array subelements, wherein four of the square array subelements meet at an intersection point, and wherein the step of forming an image includes the step of forming the image having a diameter of one blur diameter (the slightly blurred image of 142a-e, 152 or 154).

Regarding claim 13, Vock discloses a method for locating a position of a feature in a scene, comprising the steps of forming an image of the feature using a segmented light-detector array having a plurality of light-detector subelements, wherein each of the light-detector subelements has an output signal (col. 3, 13-25 and col. 7, lines 33-40); and cooperatively analyzing the output signals from at least two spatially adjacent light-detector subelements to establish a data set reflective of an extent to which output signals responsive to the image of the feature are produced from exactly one or from more than one of the adjacent light-detector subelements, and to reach a conclusion from the data set as to a location of the image of the feature on the segmented light-detector array (col. 3, 13-25 and col. 7, lines 33-40).

Regarding claim 14, Vock shows in Figs. 2, 4-6, a method wherein the step of forming includes the step of providing a sensor (40, i.e., solid state camera, 132, i.e., focal plane elements or 108, i.e., array of elements) including an optics system (42, 71,102 and 130) that forms the image of the feature of the scene at an image surface, and the segmented light-detector array at the image surface upon which the image is formed.

Regarding claim 20, Vock shows in Figs. 2, 4-6, wherein the step of providing a sensor includes the step of providing a two-dimensional segmented light-detector array.

Regarding claim 21, Vock shows in Figs. 2, 4-6, wherein the step of providing a sensor includes the step of providing a two-dimensional segmented light-detector array formed of a pattern of intersecting light-detector subelements.

Regarding claim 22, Vock discloses a method wherein the step of cooperatively analyzing includes the steps of determining whether output signals responsive to the image of the feature are produced in single ones or combinations of the intersecting light-detector subelements, and identifying the location of the image of the feature responsive to a distribution of the output signals from the step of determining whether output signals responsive to the image of the feature are produced in the intersecting light-detector subelements (col. 3, 13-25 and col. 7, lines 33-40).

Regarding claim 23, Vock discloses a method wherein the step of cooperatively analyzing includes the steps of determining the relative strengths of the output signals responsive to the image of the feature that are produced in combinations of the intersecting light-detector subelements, and identifying the location of the image of the feature responsive to the relative strengths of the output signals from the step of determining the relative strengths of the output signals responsive to the image of the feature that are produced in combinations of the intersecting light-detector subelements (col. 12, lines 49-60 and col. 13, lines 1-6).

Regarding claim 24, Vock shows in Figs. 6A-B a method for locating a position of a feature in a scene, comprising the steps of forming an image (120, 142e, 152 or 154) having a diameter of about one blur diameter (the slightly blurred image of 142a-e, 152 or 154) of the feature using a two-dimensional segmented array (132, 140 or 150)

having a plurality of square array subelements, wherein four of the square array subelements meet at an intersection point, and wherein each of the array subelements has an output signal (col. 7, lines 33-40); and cooperatively analyzing the output signals from at least two spatially adjacent array subelements to establish a data set reflective of an extent to which output signals responsive to the image of the feature are produced from exactly one or from more than one of the adjacent array subelements, and to reach a conclusion from the data set as to a location of the image of the feature on the segmented array (col. 3, 13-25 and col. 7, lines 33-40).

6. Claims 1-6, and 13-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Perregaux (U.S. Patent No. 6,654,056 B1).

Regarding claim 1, Perregaux discloses, a method for locating a position of a feature in a scene (document), comprising the steps of forming an image of the feature using a segmented array (10, i.e., photosensitive chip) having a plurality of array subelements (100, i.e., photosite), wherein each of the array subelements has an output signal; and cooperatively analyzing the output signals (via electronic subsystem (ESS)) from at least two spatially adjacent array subelements to establish a data set reflective of an extent to which output signals responsive to the image of the feature are produced from exactly one or from more than one of the adjacent array subelements and to reach a conclusion from the data set as to a location of the image of the feature on the segmented array (col. 14, lines 28-36).

Regarding claim 13, Perregaux discloses a method for locating a position of a feature in a scene (document), comprising the steps of forming an image of the feature

using a segmented light-detector array (10, i.e., photosensitive chip) having a plurality of light-detector subelements (100, i.e., photosite), wherein each of the light-detector subelements has an output signal; and cooperatively analyzing the output signals (via electronic subsystem (ESS)) from at least two spatially adjacent light-detector subelements to establish a data set reflective of an extent to which output signals responsive to the image of the feature are produced from exactly one or from more than one of the adjacent light-detector subelements, and to reach a conclusion from the data set as to a location of the image of the feature on the segmented light-detector array (col. 14, lines 28-36).

Regarding claim 2, Perregaux discloses, the step of forming includes the step of providing a sensor including an optics system (located within the raster input scanner (RIS)) that forms the image of the feature of the scene (document) at an image surface, and the segmented array at the image surface upon which the image is formed (col. 14, lines 5-7).

Regarding claims 3, Perregaux shows in Fig. 4 the step of providing a sensor (10, i.e., photosensitive chip) includes the step of providing a one-dimensional segmented array formed of pairs of two adjacent array subelements (100, i.e., photosites).

Regarding claim 4, Perregaux discloses the step of cooperatively analyzing includes the steps of determining whether output signals responsive to the image of the feature are produced by one or both of the two adjacent array subelements (the function of the raster input scanner (RIS), col. 14, lines 9-11), and identifying the location of the

image of the feature (document) responsive to the step of determining whether output signals responsive to the feature are produced by one or both of the two adjacent array subelements (col. 14, lines 9-11) (col. 14, lines 28-36).

Regarding claim 5, Perregaux discloses the step of cooperatively analyzing includes the steps of determining relative strengths of output signals responsive to the feature produced by the two adjacent array subelements, and identifying the location of the image of the feature responsive to the step of determining relative strengths of output signals responsive to the feature (col. 14, lines 28-36).

Regarding claim 6, Perregaux shows in Fig. 4, the step of providing a sensor includes the step of providing a one-dimensional segmented array having spatially overlapping array subelements.

Regarding claim 14, Perregaux discloses the step of forming includes the step of providing a sensor including an optics system that forms the image of the feature of the scene at an image surface, and the segmented light-detector array at the image surface upon which the image is formed.

Regarding claim 15, Perregaux shows in Fig. 4 the step of providing a sensor includes the step of providing a one-dimensional segmented light-detector array formed of pairs of two adjacent light-detector subelements.

Regarding claim 16, wherein the step of cooperatively analyzing includes the steps of determining whether output signals responsive to the image of the feature are produced by one or both of the two adjacent light-detector subelements (the function of the raster input scanner (RIS), col. 14, lines 9-11), and identifying the location of the

image of the feature responsive to the step of determining whether output signals responsive to the feature are produced by one or both of the two adjacent light-detector subelements (col. 14, lines 9-11) (col. 14, lines 28-36).

Regarding claim 17, the step of cooperatively analyzing includes the steps of determining relative strengths of output signals responsive to the feature produced by the two adjacent light-detector subelements, and identifying the location of the image of the feature responsive to the step of determining relative strengths of output signals responsive to the feature (col. 14, lines 28-36).

Regarding claim 18, Perregaux shows in Fig. 4 the step of providing a sensor includes the step of providing a one-dimensional segmented light-detector array having spatially overlapping light-detector subelements.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ogawa (U.S. Patent No. 5,499,098) discloses an optical position detecting unit and optical coordinate input unit utilizing a sub-portion of an m-sequence pattern.

Pollard (U.S. Patent No. 6,259,826 B1) discloses an image processing method and device.

Watanabe (U.S. Patent No. 6,522,356 B1) discloses color solid-state imaging apparatus.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kevin Wyatt whose telephone number is (571)-272-5974. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571)-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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